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TRASKBRITT, P.C./ ALLIANT TECH SYSTEMS				
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SALT LAKE CITY, UT 84110				
EXAMINER				
CIRIC, LJILJANA V				
ART UNIT		PAPER NUMBER		
3744				
NOTIFICATION DATE		DELIVERY MODE		
07/09/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTOMail@traskbritt.com

Office Action Summary

Application No.

10/694,387

Applicant(s)

KROLICZEK ET AL.

Examiner

Ljiljana (Lil) V. Ciric

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
4a) Of the above claim(s) 1-17, 19, 38 and 42 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 18, 20-37 and 39-41 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 14 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :11/19/2004, 07/13/2005, 07/27/2005, 12/07/2005, 04/17/2007.

DETAILED ACTION***Election/Restrictions***

1. Applicant's election without traverse of the fifth species or the embodiment of Figures 11 through 19D (and readable on claims 18, 20 through 37, and 39 through 41) in the reply filed on April 24, 2008 is acknowledged. However, in response to applicant's comment that claims 18, 20 through 30, 32 through 37, 40, and 41 are considered by applicant to be generic, the examiner hereby notes that, in an application presenting various species, a generic claim should read on each of these views; but the fact that a claim does so read is not conclusive that it is generic. In general, a generic claim should require no material element additional to those required by the species claims, and each of the species claims must require all of the limitations of the generic claim. Claims 18, 20 through 30, 32 through 37, 40, and 41 fail to collectively meet all of the abovementioned requirements and are thus not generic claims per se. See MPEP 806.04(d).

2. Claims 1 through 17, 19, 38, and 42 are hereby withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to the various nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 24, 2008.

Drawings

3. The drawings were received on June 14, 2004. These drawings are hereby approved.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 20, 22 through 25, 27, 29 through 32, 36, 37, 37, 40, and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 20 as written, it is not clear which range of thermal conductivities for the primary wick are encompassed by the limitations “low enough to reduce leakage of heat from the heated wall, through the primary wick, toward the liquid barrier wall”; absent any clarification and if merely interpreted broadly as would be required, the aforementioned limitations, could, however, read on the thermal conductivity of a wick made of ANY material since NO material is a perfect conductor.

There is insufficient basis in the claims for the following limitations in the claims, for example: “the interface at the primary wick” [claim 22, line 1]; “the surface contact between the heat wall and the primary wick” [claim 24, lines 1-2]; and, “vapor bubbles formed within the vapor vent channel” [claim 29, lines 1-2; claim 36, lines 1-2].

The term “significant” in claim 23 is a relative term which renders the claim indefinite. The term “significant” is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Thus, as used to qualify the size of the cross section of the vapor removal channel, the term “significant” renders the same indeterminate and the claim indefinite.

With regard to claim 24 as written, it is not clear with respect to which heat transfer rate the heat transfer rate recited in line 2 of the claim is “better”.

The term “sufficient” in claim 25 is a relative term which renders the claim indefinite. The term “sufficient” is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Thus, as used to qualify the amount of vaporization at the interface between the primary wick and the heated wall, the term “sufficient” renders the same indeterminate and the claim indefinite.

The term “near” in claim 30 is a relative term which renders the claim indefinite. The term “near” is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

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Thus, as used to qualify the location of the vaporization within the primary wick, the term "near" renders the same indeterminate and the claim indefinite.

With regard to each of claims 31 and 39 as written, it is not clear to which previously recited element the term "which" appearing in line 3 of claim 31 and in line 2 of claim 39 refers. Recommend replacing the term "which" with a direct recitation of the element(s) referred to thereby (i.e., "said....." in lieu of "which").

With regard to claim 32 as written, it is not clear which particular additional structure, if any, is encompassed by the limitation "is thermally segregated" appearing in lines 1-2 of the claim.

With regard to claim 37 as written, it is not clear which particular additional structure, if any, is encompassed by the limitation "is cold-biased" appearing in line 1 of the claim.

With regard to each of claims 40 and 41 as written, it is not clear which particular additional structure, if any, is encompassed by the limitation "is subcooled by the condenser" appearing in line 2 of claim 40 and by the limitation "an amount of subcooling produced by the condenser balances heat leakage through the primary wick" as recited in lines 1-2 of claim 41.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. As best can be understood in view of the indefiniteness of some of the claims as outlined above in paragraph 5 of this Office action, claims 18, 20 through 27, 32 through 34, 37, 40, and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Dornier System GmbH (EP 0 210 337; made of record via IDS).

Dornier System GmbH discloses an evaporator and a heat transfer system essentially as claimed, including, for example: an evaporator 1 as shown in Figure 1 or in Figure 2 in a closed loop heat transfer system as defined in the claims of Dornier System GmbH, where the closed loop heat transfer system includes a reservoir for supplying fluid to the evaporator (i.e., and thus inherently in the liquid return line for the evaporator 1) as well as a condenser which inherently has a vapor inlet and a liquid outlet; a heated wall 3 or 6; a liquid barrier wall 2 or 4; a primary wick 8 disposed between adjacent sides of the heated wall 3 or 6 and the liquid barrier wall 2 or 4, with the primary wick 8 inherently not being a perfect conductor and thus having a thermal conductivity which at least somewhat reduces heat leakage from the heated wall 3 or 6, through the primary wick 8, and toward the liquid barrier wall 2 or 4; a vapor removal channel 7 located at an interface between the primary wick 8 and the heated wall 3 or 6; a liquid flow channel 5 located between adjacent sides of the liquid barrier wall 2 or 4 and the primary wick 8; the heated wall 3 or 6 and the primary wick 8 accommodating the vapor removal channel 7 as shown in Figure 1; a liquid flow inlet 11 receiving liquid for the flow into the liquid flow channel 5; a vapor line beginning at vapor outlet 10 of the evaporator 1; and, a liquid return line providing fluid communication upstream of the liquid flow inlet 11 to the evaporator 1.

The reference thus reads on the claims.

8. Alternately for claims 18, 20 through 27, 32 through 34, 37, 40, and 41 and as best can be understood in view of the indefiniteness of some of the claims as outlined above in paragraph 5 of this Office action, claims 18, 20 through 37 and 39 through 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Matra Marconi Space France S.A. (EP 0 987 509 A1, made of record via IDS).

Matra Marconi Space France S.A. discloses an evaporator and a heat transfer system essentially as claimed, including, for example: a generally annular evaporator or unit 1 at a first location as shown in Figure 1 in a closed loop heat transfer system, where the closed loop heat transfer system includes a reservoir 18 in the liquid return line to the evaporator or unit 1 at the first location as well as a condenser

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or unit 1 at the second location as shown in Figure 1, the condenser or unit 1 at the second location as shown in Figure 1 having a vapor inlet and a liquid outlet; a heated wall corresponding to the outside wall of housing 8 or to flange 9 at the first location; a primary wick 20 disposed between adjacent sides of the heated wall 8 or 9 and the liquid barrier wall 27, with the primary wick 20 inherently at least not being a perfect conductor and thus having a thermal conductivity which at least somewhat reduces heat leakage from the heated wall 8 or 9, through the primary wick 20, and toward the liquid barrier wall 27; a vapor removal channel made up of grooves 10 located at an interface between the primary wick 20 and the heated wall 8 or 9; a secondary wick 19 disposed between the vapor removal channels or grooves 10 and the primary wick 20 as shown in Figure 2; a liquid flow channel 5 located between adjacent sides of the liquid barrier wall 27 and the primary wick 20; the heated wall 8 or 9 and the primary wick 20 accommodating the vapor removal channel or grooves 10 as shown in Figure 2; a liquid flow inlet at port 6, for example, receiving liquid for the flow into the liquid flow channel; a vapor line beginning at vapor outlet or port 5 of the evaporator 1; and, a liquid return line providing fluid communication upstream of the liquid flow inlet or port 6 to the evaporator or unit 1 at the first location. The pores of the wicks 19 and 20 at the interface therebetween are at least broadly readable on the vapor vent channel at an interface between the primary wick 20 and the secondary wick 19 as recited in each of claims 28 through 30, 35, and 36 of the instant application. With regard to claims 31 and 39 of the instant application, the wall of tube 27 of Matra Marconi Space France S.A. could be alternately broadly readable on the internal heated wall (the wall of tube 27 IS heated as disclosed by Matra Marconi Space France S.A.), with outer housing 8 then being readable on the liquid barrier wall and with one of wicks 19 or 20 being readable on the primary wick as recited in claims 31 and 39 of the instant application.

The reference thus reads on the claims.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise

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extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 18, 20 through 27, 31 through 34, 37, and 39 through 41 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over at least claims 1, 2, 4, 7, 8, 10 through 13, 17 through 19, 22, 23, 25 through 28, and 43 of U.S. Patent No. 7,251,889 B2, issued to Krolczek et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because the method claims of U.S. Patent No. 7,251,889 B2 outline the steps for making the evaporator and the heat transfer system of the instant application as recited in the abovementioned claims.

Conclusion

11. The additional prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ljiljana (Lil) V. Ciric whose telephone number is 571-272-4909. The examiner works a flexible work schedule but can normally be reached on most days during the work week between the hours of 10:30 a.m. and 6:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl J. Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ljiljana (Lil) V. Ciric/

Primary Examiner, Art Unit 3744